How to Find the Total Volume of a 3-Basin Sink:

Formula for Volume:								
Length	×	Width	×	Depth	=	Total Volume

Using Inches to find volume (cubic inches):

10 inches	×	14 inches	×	10 inches	=	$1{,}400 \text{ inches}^3$

There are 231 cubic inches per gallon:

$$\frac{1{,}400 \text{ inches}^3}{1} \times \frac{1 \text{ gallon}}{231 \text{ inches}^3} = \frac{6.06 \text{ gallons}}{1}$$

There are 3 sink basins:

3	×	6.06 gallons	=	18.18 gallons

The rule says:

> **§ 5-305.11(A):** *"A Class IV mobile food unit must have a potable water system under pressure. The system must be of sufficient capacity to furnish enough hot and cold water for food preparation, warewashing, and handwashing, and the requirements of these rules. This supply must consist of a minimum of five gallons of water for handwashing and <u>30 gallons or twice the volume of the three-compartment sink, whichever is greater,</u> of water for warewashing.*

So, given what we know, how much water needs to be allocated for warewashing onboard a mobile unit with this installed 3-basin sink?

If the 3-basin sink in the example above is approximately 18 gallons in volume, then, at least 36 gallons of fresh water needs to be allocated for warewashing for this example. The remaining design factors for the water system are minimum allocations for handwashing (5-gallons), and for food preparation (? gallons), which are menu dependent.

Hood River County Health Department is happy to help operators calculate the volumes of their tanks if the dimensions are provided to us. Some other helpful formulas are:
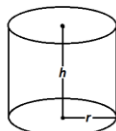
Cylinder:	Isosceles Triangular Prism:
$V = \pi r^2 h$ r = Radius h = Height π = Pi (~3.14)	Volume = $[\frac{1}{2} \times b \times h] \times L$